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January 23, 2006

The Honorable Kent A. Jordan
United States District Court
844 King Street
Wilmington, DE 19801

EFILE AND HAND DELIVERY

Re: Ampex v. Eastman Kodak Company, et al., C.A. No. 04-1373-KAJ

Dear Judge Jordan:

Pursuant to Section 8 of the Court's October 17, 2005 Scheduling Order, defendants Eastman Kodak Company and Altek Corporation submit this letter regarding Ampex's presentation at the January 12, 2006 tutorial in this matter.

I. Ampex's Suggestion That The Term "Video" Can Include Any Image Is Not Supported By The Patent.

The asserted claims of the '121 Patent require the storage of, and generation of reduced size images from, "video images" and "video pixel data." *See, e.g.,* Claims 7 and 8. The defendants' digital cameras take still photographs and generate thumbnails from these still photographs. As a result, to make its infringement case, Ampex seeks to define "video" broadly to cover "any images." Towards this end, at the tutorial, Ampex stated that the source of the images for the patented invention could be "any sort of source of images." Tutorial Transcript, p. 7. Ampex also stated that a still store could be any device that can "store still images." Trans., p. 5.

Ampex's suggestion that "video" can be *any* image, and that a still store is *any* device that can store still images, is inconsistent with the Patent. The Background of the Invention states unequivocally that the invention was developed in the context of broadcast television: "This invention relates to a digital electronic still store for broadcast television signals . . ." '121 Patent, Col. 1, ll. 11-12. The patent describes inputting video from television into an electronic still store system and then capturing and storing stills or frames from that video. *See* '121 Patent, Col. 2, l. 65 – Col. 3, l. 1; Col. 4, ll. 16-27. In fact, the promotional video Ampex played during its presentation makes clear that the source of images for the invention is not *any* source but instead a "composite *video* source." Trans., p. 5 (emphasis added). Moreover, a definition of "video" that encompasses any image would render the term "video" in the claims redundant and meaningless. Instead of using the phrases "video image" and "video pixel data," the claims could simply have used the terms "image" and "pixel data."

In an effort to create the impression that the defendants' digital cameras do in fact capture and process video, Ampex also purported to demonstrate one of the accused digital cameras doing just that at the tutorial. *See* Trans., p. 9. Ampex likened the camera to a "small TV camera" and

then demonstrated that, as an operator moves the camera around prior to taking a photograph, the camera appears to be capturing moving images. Ampex then suggested that it was freezing *one of those images* as the camera captured a photograph. *See* Trans., p. 9. In fact, the moving images visible to the operator on the camera's LCD screen prior to capture, and the image actually captured, are two separate images consisting of different data. Prior to capture, the camera is in a low resolution mode. When the operator presses the shutter to capture a photograph, the camera switches to a high resolution mode and then captures new, different image data at this higher resolution mode. As a result, the data that is displayed on the LCD screen prior to capture is *not* the data that is actually captured by the camera when a photograph is taken.

II. Ampex's Suggestion That The Invention Includes The Automatic Generation Of Reduced Size Images Is Not Supported By The Patent.

Because the defendants' digital cameras automatically generate thumbnails (low resolution images) and medium resolution images, Ampex seeks to define the invention as including the automatic generation of reduced size images. At the tutorial, Ampex stated that the generation of reduced size images in the invention occurs automatically and that, as a result, for every full size image stored on disk, there is a corresponding reduced size image: "You will see that for every still full-sized image, there is a corresponding reduced size image." Trans., p. 8.

This is directly contrary to the patent. The specification makes clear that reduced size images "may" – as opposed to must -- be generated at the user's option and that, as a result, there is *not* necessarily a corresponding reduced size image on disk for every full size image stored on disk:

> In a similar fashion, when video data received from disk store 24 ***does not contain a corresponding quarter spatial resolution copy***, size reducer 26 ***may be employed*** to generate a quarter spatial resolution copy for subsequent transfer to either frame store 22 or disk store 24. Hence, any time frame store 22 receives a video image frame that does not have a corresponding quarter resolution copy, the size reducer 26 ***may be used*** to make such a copy. '121 Patent, Col. 4, ll. 7-15 (emphasis added).

If the generation of reduced size images were automatic, and occurred in every instance, there would be no full size images on disk without corresponding reduced size images. The patent makes explicitly clear, however, that there are instances in which a full size image is stored on disk without a corresponding reduced size image. In fact, contrary to Ampex's suggestion, the word "automatic" never appears in the patent.

The claims are consistent with the specification in this regard. Claim 7 states that the size reducer is for "selectively generating" reduced size images: "means responsive to said random access memory means *for* selectively *generating* one of said corresponding reduced size versions from the respective full size image..." '121 Patent, Col. 6, ll. 41-44 (emphasis added).

III. Ampex's Suggestion That The Invention Includes The Ability To "Select" A Reduced Size Image In A Browse Display In Order To Obtain A Full Size Image Is Not Supported By The Patent.

Aware that the prior art included systems with rapid browse functions, Ampex seeks to establish that the invention also included the ability to select one of the reduced size images displayed in a

browse in order to obtain a full size image. At the tutorial, Ampex stated just this: "So now the user can select one of those reduced-size images and fetch the corresponding full-sized image..." Trans., p. 9.

Neither this capability of selecting a reduced size image in order to obtain a full size image, nor any method of implementing this capability, however, is described in the patent. In fact, the patent discusses only two modes of display: a first mode in which the system recalls a full size image from disk for display; and a second mode in which the system recalls multiple reduced size images for display. *See* '121 Patent, Col. 2, ll. 5-16. The patent says nothing about switching between these two modes.

Ampex suggests that the claim term "corresponding" -- as in corresponding reduced size image -- suggests the ability to select the reduced size image to obtain the full size image. It is defendants' position, however, that the claims use the term "corresponding" according to its normal usage: to describe that the reduced size image is simply a smaller version of the full sized image.

In any event, it is also defendants' position that the prior art included the ability to select a reduced size image from a browse display in order to obtain a full size image. Ampex's prior art expert in the ITC proceedings admitted that the prior art included this capability. *See* Anderson Expert Report, Tab D, p. 1; Anderson Dep., pp. 371-74. He also admitted that such a capability would have been an "obvious" component of any browse function. *See* Anderson Dep., p. 134.

IV. Ampex Incorrectly Suggested That The Complex Processing That Occurs In The Defendants' Digital Cameras Was Part Of The Invention.

In an attempt to blur the distinction between the older electronic still store technology of the '121 Patent, and defendants' digital camera technology, Ampex suggested that the complex processing that takes place during the capture and retrieval modes in the digital cameras was also part of the invention. *See* Trans., pp. 17-19, 26-31. This processing is not described in the patent. In fact, the essence of the invention according to Ampex is that images can be retrieved more quickly because processing of the images is *not* required upon retrieval. *See* Anderson ITC Trial Testimony, pp. 20-22.

The purported invention is related to electronic still stores that receive an analog video signal input and capture individual still frames from this video input for later use during a television broadcast. The producers of a broadcast expected the images that they accessed from the disk store for a broadcast would be the very same television images, with the same quality and color, that were originally input into the still store system. Only the size might be changed for use in a later broadcast.

Consistent with this expectation, the patent describes no changes to the full size image data from the time the image is initially stored in digital format in the frame store (random access memory), to when the image is stored on disk, to when the image is retrieved from disk and sent back to the frame store. Similarly, the patent describes no changes to the reduced size image data from the time the image is stored in the frame store, to the time the image is stored on disk, to when the image is retrieved from disk and sent back to the frame store. The claims confirm this. The claims specifically recite that the image that is stored in random access memory is the same image that is stored on disk and is the same image that is later accessed and output from the

system. Claim 7, for instance, states that the random access memory stores "***video pixel data*** representing one of a succession of full size images" and that the bulk memory, or disk, receives and stores "***said video pixel data*** from said random access memory." '121 Patent, Col. 6, ll. 27-29, 32-33 (emphasis added).

The only processing described in the patent is the processing associated with the input of television images into the system and the output of images from the system. *See* '121 Patent, Col. 3, ll. 12-34; Col. 4, ll. 31-34. Specifically, the patent describes that, during input, analog television images are converted to digital images. Similarly, during output, the digital images are converted back to analog for display on television. All of this processing occurs either before an image has been input into the frame store (if at the input phase) or after an image has been sent from the frame store to the output circuitry (if at the output phase). Put differently, other than the generation of reduced size images from full size images, the digital image data in the patent is not processed. As a result, the full size image that is stored in the frame store is the same full size image that is stored on disk. Similarly, the reduced size image that is stored in the frame store is the same reduced size image stored on disk. The patent describes no processing that occurs between the frame store and disk.[1]

In contrast to the system described in the patent, as described during defendants' tutorial presentation, the digital image data in the defendants' digital cameras undergoes extensive processing from when data is initially captured and stored in random access memory, to when new data is generated, compressed and stored on disk, to when data is retrieved and displayed. In fact, the initial image that is first stored in random access memory (*i.e.*, the CFA image stored in the CFA buffer) is actually discarded once the primary image has been generated based upon the processing of the CFA image data. The resulting, newly generated primary image is different in size, color and image quality than the initial CFA image: it is smaller and contains three times the color information per pixel.[2] Each subsequent step of image processing that occurs in the digital cameras --for example, interpolation, white balance, color correction, and JPEG compression -- generates new and different image data, and at each step the old data is discarded. The primary image that is ultimately stored on the memory card, therefore, is not the same image that was originally captured and stored in random access memory. Moreover, when an image is retrieved from the memory card for display, much of the same processing occurs, including processing that again changes the size of the image. As a result, the image that is subsequently displayed on the camera's LCD screen is different from the image that was stored on the memory card.

Ampex attempted to suggest that much of this extensive processing in the accused cameras was part of the '121 invention. But this digital processing, which is designed to create a better image than what the digital camera actually captured, is nowhere described in the '121 Patent.

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[1] Ampex asserted at the tutorial that the analog to digital conversion described in the patent is an example of compression. *See* Trans., p. 19. It is not. Analog to digital conversion simply involves a format change. In contrast, compression involves the storage of data using less space. In fact, unlike the accused cameras which JPEG compress the image data for storage on the memory card, no compression of digital image data is disclosed in the '121 Patent. The image data in the '121 Patent is transferred from the random access memory to disk store as is.

[2] For example, there are 3 million pixels in a 3-megapixel image. In order to generate a 3-megapixel Red, Green, Blue ("RGB") image from CFA image data, the cameras must perform millions of calculations to generate 3 color values (one for each of RGB) for each pixel. Although Ampex described the interpolation process as an "example of compression of data" (Trans., p. 28), it is the opposite – in this context it involves the creation of more data than what is initially captured.

Moreover, this contention is inconsistent with Ampex's repeated assertion that the benefit of the invention is that images can be retrieved more quickly because processing of the images is *not* required upon retrieval.

V. Ampex Sought To Ignore What Its Own Expert Described As The Most Relevant Prior Art.

Ampex represented during its presentation that its invention "is much faster than the prior art and that's the key." Trans., p. 13. Ampex purported to demonstrate this by showing an animated race between a prior art system described in a Quantel patent (U.S. Patent No. 4,302,776) and the '121 invention.

As an initial matter, Ampex's animation did not fairly present the '776 system or the '121 invention. Relying on one figure of the '776 Patent (Figure 18), Ampex asserted that the '776 system was slow because it did not store reduced size images on disk but instead reduced image size on the fly as images were retrieved from disk. *See* Trans., pp. 11-13. A different figure of the '776 Patent (Figure 19), however, shows a size reducer positioned prior to the disk and, as a result, teaches the storage of reduced size images to disk. *See* '776 Patent, Figure 19. Contrary to the representation in Ampex's animation, therefore, the system described in the '776 Patent in fact could store reduced size images on disk for later recall. Ampex's animation also portrayed the '121 invention as much faster than the speed Ampex actually achieved. A video of the Ampex system that Ampex claims embodies the teachings of the patent, taken in the ITC proceedings pursuant to a notice of inspection, reveals the Ampex system to be far slower than portrayed in the animation. *See* EKC 002002610.

More importantly, although it asserted that its invention "is much faster than *the prior art*," Ampex simply ignored the prior art system that its own expert described as the *closest prior art* to the claimed invention: the Quantel Paint Box system. Anderson Dep., p. 466. As the video of the actual Paint Box system demonstrated, it could rapidly browse reduced size images stored on disk.

Respectfully submitted,

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